



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,696	09/29/2000	David L. Rechberger	39808/SAH/C715	1549
3017	7590	10/19/2004	EXAMINER	
BARLOW, JOSEPHS & HOLMES, LTD. 101 DYER STREET 5TH FLOOR PROVIDENCE, RI 02903			LAVARIAS, ARNEL C	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,696

Applicant(s)

RECHBERGER ET AL.

Examiner

Arnel C. Lavarias

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-37, 39-41 and 44-60 is/are pending in the application.
- 4a) Of the above claim(s) 2-37, 39-41 and 44-59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. In view of the appeal brief filed on 8/9/04, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The Applicant's arguments with respect to Claim 60 in the appeal brief filed 8/9/04 have been considered but are moot in view of the new ground(s) of rejection.
3. Claim 60 is rejected as follows.

Election/Restrictions

4. The Examiner notes that the instant application was previously subject to a restriction requirement in the Office Action, dated 5/22/02, the Applicant having elected Species XXVI in the submission, dated 7/30/02. Since prosecution of the instant application is

Art Unit: 2872

reopened, the species previously elected, i.e. Claim 60, will again be examined in the instant application.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paniccia et al. (U.S. Patent No. 6393169) in view of Honmou (U.S. Patent No. 6019523).

Paniccia et al. discloses an optical device package (See for example Figures 1A-B, 3C, 5, 9) comprising a substrate (See for example 153 or 103 in Figure 1A) having a mounting surface (See for example upper surface of either 153 or 103 in Figure 1A); an optoelectronic device (See for example 115, 117, 119, 121 in Figure 1A) having a lower mounting surface operably coupled to the mounting surface of the substrate wherein the optoelectronic device is in electrical communication with the substrate (See for example 149, 111, 107, 151, 113, 109 in Figure 1A); the optoelectronic device further having an active upper surface disposed substantially parallel to the mounting surface of the substrate (See for example upper surface of 115, 117, 119, 121 in Figure 1A) and being configured to emit or receive light normal to the active upper surface (See Figure 1A); an optically transparent fiber coupling assembly (See for example 123 in Figure 1A; 209A-B, 301 in Figure 3C; col. 4, line 29-col. 5, line 18; col. 8, lines 1-17) having a body

portion that is integrally molded with the optoelectronic device such that the optoelectronic device is embedded within the fiber coupling assembly, the body portion being configured and arranged to transmit light; and the fiber coupling assembly further having a planar mirror within the body portion of the fiber coupling assembly to reflect light traveling within the body portion (See for example 133, 135, 137, 139, 141, 143 in Figure 1A). Paniccia et al. lacks the fiber coupling assembly further having a barrel portion extending from the body portion in a direction substantially parallel to the substrate, the barrel portion being configured to operably engage a fiber optic; and an enclosure coupled to the substrate that houses the optoelectronic device. However, Honmou teaches an optical semiconductor module (See Figure 1), wherein a transparent medium (See 7 in Figure 1) is used to embed the semiconductor device and optical reflector (i.e. for example the detector/laser diode 3 and planar routing mirror 11 in Figure 1). In addition, Honmou teaches that the transparent medium may include a barrel portion to engage with an optical fiber (See for example 5, 6, 7 in Figure 1; col. 2, lines 41-64). It is further noted that the use of an enclosure to house optoelectronic devices is well known in the art. For example, Honmou teaches that an additional housing is disposed around the optically transparent material to house the optoelectronic devices (See 8 in Figure 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fiber coupling assembly further have a barrel portion extending from the body portion in a direction substantially parallel to the substrate, the barrel portion being configured to operably engage a fiber optic; and an enclosure be coupled to the substrate that houses the optoelectronic device, as taught

by Honmou, in the optical device package of Paniccia et al. One would have been motivated to have the fiber coupling assembly further have a barrel portion extending from the body portion in a direction substantially parallel to the substrate, the barrel portion being configured to operably engage a fiber optic, for the purpose of reducing alignment errors between the optical fiber and the semiconductor device, thus increasing light coupling. One would have been motivated to have an enclosure be coupled to the substrate that houses the optoelectronic device to provide additional protection and mechanical integrity for the optoelectronic devices housed within the enclosure, as well as to prevent stray light from entering the enclosure.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 3628036 to Humphrey.

Humphrey is being cited to further evidence the use of transparent optical materials in fiber coupling devices to embed optoelectronic devices (See for example 44 in Figure 5; Figure 6). Additionally, Humphrey provides conventional teachings regarding the incorporation of a barrel portion in the fiber coupling device to further aid in coupling light from an optical fiber to/from the optoelectronic device (See for example 46, 47 in Figure 6; Figure 5, 7).

Art Unit: 2872


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias
10/14/04



DREW A. DUNN
SUPERVISORY PATENT EXAMINER